

AMENDMENTS TO THE SPECIFICATION

On page 1, following the title, please insert the following:

CROSS-REFERENCES TO RELATED APPLICATIONS

This application is a National Stage of International Application PCT/GB04/001140, filed March 18, 2004. Applicant claims foreign priority benefits under 35 U.S.C. 119(a) – (d) of the following foreign application for patent: United Kingdom Patent Application No. 0306190.0, filed March 18, 2003, which is hereby incorporated by reference in its entirety.

BACKGROUND OF THE INVENTION

On page 3, beginning at line 15, please amend the paragraph as follows:

According to one aspect of the present invention therefore, there is provided an ignition system for a smoking machine, comprising a heat source that is adapted for emitting heat for igniting one end of a smoking article which is held by a smoking machine; an automatic sensor which is adapted for detecting the position of said end of the smoking article; and control means in communication with said sensor, which are adapted for automatically adjusting a parameter of the operation of said heat source ~~and/or for automatically adjusting relative movement of said heat source and/or of said article~~, depending on the position of said end as detected by said sensor, such as to enable successful ignition of said end by said heat source.

On page 4, beginning at line 5, please amend the paragraph as follows:

In use of the present invention, the sensor acts to detect the position of the end of the smoking article, and communicates information in this regard to the control means. Based on this information, the control means makes automatic adjustments as necessary to the operation of the heat source, ~~and/or to relative movement of the heat source and/or said smoking article~~, such as to enable successful ignition of the smoking article by the heat source. Successful ignition may denote ignition at the first or the second, preferably the first, attempt. Furthermore, successful ignition may denote ignition of the smoking article without any undesired heat damage to the article and/or without contact between the smoking article and the heat source during emission of heat by the heat source.

On page 5, beginning at line 15, please delete the entire paragraph.

On page 5, beginning at line 24, please delete the entire paragraph which ends on page 6, at line 6.

On page 6, beginning at line 8, please delete the entire paragraph.

On page 6, beginning at line 18, please delete the entire paragraph.

On page 6, beginning at line 22, please amend the paragraph as follows:

~~Additionally or alternatively, said control means may be adapted to automatically adjust the operation of said heat source following detection of the end of a smoking article by the sensor, such as to enable successful ignition of said end of the smoking article by the heat source.~~ Parameters of the operation of the heat source which may affect the reliability and success of ignition include the

temperature of the heat source; the channeling of the heat from the heat source to the end of the smoking article, the level and wavelength range of electromagnetic radiation that is applied by the heat source to the end of the smoking article; the length of time for which heat is applied to the end of the smoking article for igniting the article; and the timing of the application of heat to the end of the smoking article for igniting the article with respect to the “puff cycle” of a smoking machine. By adjusting any or all of these parameters, the control means may serve to enable successful ignition of a smoking article by the heat source without any or any further adjustments in relative movement of the heat source and/or said smoking article. Said control means may therefore be adapted for calculating the type and extent of any adjustments to any of these parameters which may be required for enabling successful ignition; in view of the known position of the end of the smoking article (as detected by said sensor), and for securing the performance of such adjustments. It will be appreciated however that said control means may be adapted for adjusting any or all of the aforementioned parameters of the operation of the heat source in addition to adjusting relative movement of said heat source and/or said smoking article.

On page 14, beginning at line 15, please add the following four (4) new paragraphs:

The distance separating said heat source from said end of the article during emission of heat from the heat source is typically a key parameter affecting the reliability and success of ignition, regardless of the manner in which heat is emitted by the heat source. Thus, said control means may be adapted to automatically adjust relative movement of said heat source and/or said smoking article, such that a predetermined distance separates said heat source from said end of the smoking article, whereby said end of the smoking article can be successfully ignited by the heat source.

Suitably, therefore, said heat source may be capable of movement with respect to said smoking article, and said control means may be adapted for controlling movement of said heat source, whereby the heat source under the control of said control means can be moved into or halted at a selected position. Alternatively, or in addition, said control means may be adapted for controlling movement of a smoking article held by a smoking machine, whereby said smoking article under the control of said control means can be moved into or halted at a selected position. By thus controlling relative movement of said heat source and/or said smoking article in view of the known position of said end of the smoking article, a predetermined distance separating said heat source from said end of the smoking article may readily be achieved.

Said sensor may be arranged such as to detect the end of a smoking article when said end is disposed at same predetermined distance from the heat source, or when said end is positioned such that after subsequent movement of said smoking article and/or said heat source along a pre-set locus, said end will be disposed at said predetermined distance from the heat source. Alternatively, said ignition system may be arranged such that following detection of said end of the smoking article by said sensor, said heat source and/or said smoking article are moved under the control of the control means such as to achieve said predetermined distance between said heat source and said end of the smoking article.

Suitably, said control means may be adapted to ensure that said heat source and said smoking article remain out of contact with one another during emission of heat by the heat source.

On page 18 , at line 20 please insert a page break, heading and following paragraph:

BRIEF SUMMARY OF THE INVENTION

An ignition system for a smoking machine, according to a typical embodiment, includes a heat source that is adapted to emit heat in order to ignite one end of a smoking article which is held by a smoking machine, an automatic sensor which is adapted to detect the position of the end of the smoking article, and a control unit in communication with the sensor, which is adapted to adjust automatically a parameter of the operation of the heat source depending on the position of the end as detected by the sensor, such as to enable successful ignition of the end by the heat source.

On page 18, at line 24, please insert a page break and add the following heading:

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

On page 18, at line 25, please amend as follows:

~~In the drawings:-~~

On page 20, in line 23, please insert a page break and the following heading and paragraph:

DETAILED DESCRIPTION OF THE INVENTION

For the purposes of promoting an understanding of the principles of the invention, reference will now be made to the embodiments illustrated in the drawings and specific language will be used to describe the same. It will nevertheless be understood that no limitation of the scope of the invention is thereby intended, such alterations and further modifications in the illustrated device, and such further applications of the principles of the invention as illustrated therein being contemplated as would normally occur to one skilled in the art to which the invention relates.

On page 32, at line 20, please amend the paragraph as follows:

~~It will be appreciated by the skilled man that the embodiments and modes of the invention hereinabove described rely solely on adjustments to the relative positions of the resistive coil and the end of a smoking article at the point of ignition, for improving the success of ignition. Nevertheless, in~~ In knowledge of the position of the end of a smoking article, having been detected by a sensor as hereinabove described, adjustments can also or instead be made by the control hardware to the operation of the resistive coil, whereby the success of ignition may be improved.

On page 35, in line 21, please add the following paragraph:

While the invention has been illustrated and described in detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character, it being understood that only the preferred embodiment has been shown and described and that all changes and modifications that come within the spirit of the invention are desired to be protected.

On page 41, in line 11, please insert a page break and add the following heading and paragraph:

ABSTRACT OF THE DISCLOSURE

The present invention provides an ignition system for a smoking machine, comprising a heat source (2) that is adapted for emitting heat for igniting one end of a smoking article which is held by a smoking machine; an automatic sensor (3, 4) which is adapted for detecting the position of said end of the smoking article; and control means in communication with said sensor (3, 4), which are adapted for automatically adjusting the operation of said heat source (2) and/or for automatically adjusting relative movement of said heat source and/or of said article, depending on the position of said end as detected by said sensor (3, 4), such as to enable successful ignition of said end by said heat source.

The invention further provides a kit of components for forming an ignition system in accordance with the invention, and a smoking machine comprising an ignition system in accordance with the invention.